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TEN PARADOXES OF ENVIRONMENTAL LAW

*Kenneth A. Manaster**

I. INTRODUCTION: THINGS CHANGE

As I look back over the first quarter century of environmental law, a common aphorism comes to mind: "The more things change, the more things stay the same."¹ Tremendous efforts have been made to rectify environmental degradation, and a succession of newly recognized problems has been tackled. Nonetheless, many of the original problems remain unsolved, and the fundamental causes of our environmental plight remain largely as they were at the outset.² That this observation comes so readily to mind may suggest that over the twenty-five years I have worked in this field, I have succumbed to pessimism, concluding that the skill and passion lawyers have invested in the pursuit of environmental protection has accomplished little.³

But my perspective is not one of despair. I know that a great deal has been accomplished. There is strong evidence of improvement in various indices of environmental quality. A steady stream of governmental and other reports confirms that progress is being made.⁴ Personal obser-

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1. The original French phrase, "*Plus ça change, plus c'est la même chose*," is attributed to Alphonse Karr in 1849. JOHN BARTLETT, *FAMILIAR QUOTATIONS* 443 (Justin Kaplan ed., 16th ed. 1992).

2. "Notwithstanding evident progress, the need for environmental action is at least as great as it has ever been." William K. Reilly, *Overview to CONSERVATION FOUND., STATE OF THE ENVIRONMENT: A VIEW TOWARD THE NINETIES* at xli (1987).

3. "When considering a problem as large as the degradation of the global environment, it is easy to feel overwhelmed, utterly helpless to effect any change whatsoever." AL GORE, *EARTH IN THE BALANCE* 366 (1992).

4. For example, the Conservation Foundation noted,

Solid waste management in the United States apparently has improved markedly since 1970. Generation rates for several types of solid wastes have declined. Implementation of the Marine Protection, Research and Sanctuaries Act has substantially reduced the amount of wastes—with the exception of municipal sewage sludge—dumped into the ocean. Open dumps and open burning are now uncommon. And, with the implementation of the hazardous waste provisions of the Resource Conservation and Recovery Act, the vast majority of the more hazardous substances have been diverted from the solid waste stream to be disposed of in more secure facilities.

CONSERVATION FOUND., *supra* note 2, at 106. Similarly, "[t]he United States made substantial progress in improving air quality nationwide during the 1980s." 23 COUNCIL ON ENVTL. QUALITY ANN. REP. 7 (1993) [hereinafter 1993 ANN. REP.]. "[L]evels of six common pollutants for which the U.S. Environmental Protection Agency (EPA) has set health-based na-

vations also tend to shore up, albeit anecdotally, my hopeful belief that things are getting better.

I recall, for example, that although I first arrived in the Santa Clara Valley of Northern California in midsummer of 1972, I simply did not know until the following October that a lovely mountain range was close enough to be seen from the window of my new office. Air quality was so degraded that the mountains were shrouded in smog for much of the year.⁵ Now it is the exception, rather than the rule, that the mountains surrounding Silicon Valley are obscured from view.⁶

tional ambient air quality standards" declined. *Id.* "Americans reforested 2.9 million acres of public and private forestland in fiscal 1991, near record highs, and a comparable acreage was regenerated naturally." *Id.* at 111. "In 1990 releases and transfers of toxic chemicals measured by [the Toxics Release Inventory] showed an 11-percent decrease (600 million pounds) to 4.8 billion pounds of toxic chemicals released into the environment or transferred." *Id.* at 174.

There have been other advances as well. *See, e.g.,* LESTER R. BROWN ET AL., *WORLDWATCH INST., STATE OF THE WORLD* 1993 at xvi (Linda Starke ed., 1993) [hereinafter *WORLDWATCH* 1993] ("Over the years we have chronicled some promising new trends . . . Between 1988, the peak year of production, and 1991, world production of chlorofluorocarbons fell by an astounding 46 percent."); LESTER R. BROWN ET AL., *WORLDWATCH INST., STATE OF THE WORLD* 1991, 27 (Linda Starke ed., 1991) ("Steady advances have been made since the mid-seventies in a broad array of renewable energy technologies. Many [solar] devices, machinery, and processes . . . are now economically competitive with fossil fuels. Further reductions in costs are expected in the next decade as technologies continue to improve."); William K. Reilly, *The Turning Point: An Environmental Vision for the 1990s*, 20 *Env't Rep. (BNA)* 1386, 1387 (Dec. 8, 1989) ("Progress [in Great Lakes water quality] is measurable, undeniable, and indisputable. Fecal coliform is down, nutrients are down, algae are down, biological oxygen demand is down. Twenty years ago it looked doubtful there would be any fish at all in Lake Erie; now there are plenty."); *Industrial Releases of Toxic Chemicals Continue to Decline*, 24 *Env't Rep. (BNA)* 180 (May 28, 1993) (toxic release inventory for 1991 showed toxic releases to air, water, and land at 3.38 billion pounds, 30% less than in 1988).

5. A student editorial in the Santa Clara University newspaper delicately described the phenomenon at the time:

Yes, Freshmen [and new professors too!], there *are* mountains all around us: the green Santa Cruz to the west and the Diablo Range sitting in a great pile in the east. The Diablos are the kind of mountains a mission ought to be built near; sturdy, Spanish hills. An old alumnus here for homecoming told me that in the "old days" (twenty years ago) one could see them all the time. I got my first clear view of them Sunday after being back here for a month. On all but windy or rainy days they are hidden, or at least obscured, by San Jose's world famous smog.

That's quite a shame, really, as anyone who has ever watched the moon rise out of them will attest. They're ageless hills, green for a little while in the spring and earthen brown for the rest of the year; in the winter, there's even a little snow on them sometimes. For our Mediterranean valley, they mark the seasons and give birth to the sun.

T.M. Lucas, *Return of the Mountains*, SANTA CLARA, Oct. 17, 1972, at 2.

6. *See* Bay Area Air Quality Management Dist., *Spare the Air Season off to a Hot Start*, *AIR CURRENTS*, July 1993, at 1-2 ("Air quality in the Bay Area has improved considerably over the past several decades. . . . 'There is no doubt that air quality is cleaner now than at any time in the past twenty years.'" (quoting Milton Feldstein, Air Pollution Control Officer)); Scott Thurm, *Smog Levels Keep Dropping but Weather May Get Credit*, *SAN JOSE MERCURY*

What can we make of the conflict between the sense that things are improving and the sense that the challenges facing environmental law are as daunting as ever? The contradiction is not illusory, but is instead a paradox of modern environmental law. The point is not simply that there is so much yet to be done or that many environmental quality indices are still heading in the wrong direction.⁷ Beyond those obvious truths, there also is this further truth: The tasks before us are so complex and our comprehension of them so fundamentally limited⁸ that even as we work at them and perceive that we are making progress, at the same time we just as readily conclude that we are getting nowhere. As previously hidden environmental threats come to light, we shift our focus from DDT, thermal water pollution, phosphates in detergents, and the

NEWS, Nov. 4, 1993, at 7A ("[T]he Bay Area is now the largest metropolitan area in the country to meet the federal health standard for ozone.").

7. One commentary described the complexity of the problem:

Apart from our growing threat to the integrity of the global ecological system, the dramatic changes now taking place within civilization are also likely to pose serious threats of their own to the integrity and stability of civilization itself. The accumulation of another billion people every ten years is creating a whole range of difficult problems, and all by itself the exploding population is liable to push world civilization into a supercritical state, leaving it vulnerable to very large 'avalanches' of unpredictable change.

GORE, *supra* note 3, at 366. The Worldwatch Institute similarly reported:

Environmental initiatives notwithstanding, all the major trends of degradation that existed a decade ago have continued. The earth's forests continue to shrink, its deserts continue to expand, and a third of all cropland continues to erode excessively. The number of plant and animal species with which we share the planet is diminishing. The concentration of greenhouse gases in the atmosphere climbs higher each year. And almost every new assessment of the ozone layer's health indicates accelerating depletion.

WORLDWATCH 1993, *supra* note 4, at xvii. In addition, the Worldwatch Institute notes that some "improvements notwithstanding, the broad indicators showed a continuing wholesale deterioration in the earth's physical condition. . . . Rapid population growth, environmental degradation, and deepening poverty are reinforcing each other in a downward spiral in many countries." *Id.* at 4-5. "In short, the programs our country has created to tackle environmental problems are not up to the job ahead. We must critically examine and then change our policies and institutions, or prepare to face serious threats to public health, the environment, and the national economy." Reilly, *supra* note 2, at xxxix. "The world's oceans are under stress, with their productive and regenerative capacity threatened by pollution and over-utilization of marine resources." 1993 ANN. REP., *supra* note 4, at 32.

8. See 1993 ANN. REP., *supra* note 4, at 17 ("Along with other nations, the United States lacks full and accurate information on the status and distribution of biodiversity components and the functioning of ecosystems."); *id.* at 225 ("Despite decades of research and regulation, the federal government still lacks a comprehensive assessment of the quality of the nation's waters."); 22 COUNCIL ON ENVTL. QUALITY ANN. REP. 43 (1992) ("Despite the work of scientists in and out of government, current environmental indicators are not as comprehensive or meaningful as needed.").

supersonic transport, to Love Canal, stratospheric ozone depletion, global warming, ancient forests, and whatever else yet awaits us.⁹

For now we have no choice but to live with this overriding, Sisyphean paradox, while continuing to strive toward the day it can be resolved. The desired conclusions, of course, would be that things unequivocally are getting better, that there are fewer and fewer environmental pitfalls yet to be revealed, and that basic causes of environmental risk and degradation are being eliminated.

Environmental lawyers work amidst other seeming paradoxes as well, other aspects of this field that appear to present inescapable contradictions.¹⁰ One avenue toward heightened understanding of environmental law after its first quarter century may be an exploration of paradoxes that have characterized the field. Sharper awareness of these contradictions should assist us in making progress toward their ultimate resolution.

This Article examines nine additional paradoxes, starting with those that pertain to the functions of lawyers involved in environmental regulation and litigation, and concluding with those of broader significance to environmental policy.¹¹

9. The Conservation Foundation has noted that "[p]roblems long recognized remain unsolved, and new ones continually appear." Reilly, *supra* note 2, at xli. Similarly, the Worldwatch Institute noted that in 1984

stratospheric ozone depletion and the risks associated with the resulting increased ultraviolet radiation reaching the earth's surface were of little more than academic interest. . . . Since then, a steady stream of reports has chronicled the progressive depletion of the protective ozone layer.

. . . A decade ago, few people were deeply troubled about the destruction of tropical rain forests. Today, public concern about this loss and its potential consequences is worldwide.

WORLDWATCH 1993, *supra* note 4, at xv. In addition, a Northern California newspaper reported that "[c]oncern is growing among scientists, wildlife experts and public health officials that a widely used class of chemicals [chlorine compounds] may cause serious problems in people and the environment—including breast cancer, neurological problems in children and deformities and infertility in wildlife." Glenda Chui, *Chlorine Chemicals Causing Concern*, SAN JOSE MERCURY NEWS, Nov. 8, 1993, at 1A.

10. The term "paradox" is used quite broadly here, describing aspects of environmental law and regulation that appear to be self-contradictory or at least to present serious, practical tensions not readily susceptible of resolution. Compare A.R. LACEY, A DICTIONARY OF PHILOSOPHY 153 (1976), which includes the following as part of the definition of "paradox":

Etymologically, "against belief." Full-blooded paradoxes which affect the basis of logic exist when some statement needed for logic can apparently be both proved and disproved. . . .

Other paradoxes claim that apparently indispensable notions are inconsistent . . . or that apparently possible situations are impossible Loosely speaking a paradox may be little more than something odd or unexpected

11. Although 10 paradoxical aspects of environmental law are presented here, the impulse to conform to a current fad by presenting them as a "Top 10" list will be resisted. A ranking of their relative importance is not necessary for the purposes of this Article, although the

II. THE LAWYER FOR THE ENVIRONMENT

One of the consistent, though minor, pleasures of working in environmental law is the frequency with which every environmental lawyer (EL) experiences the following type of conversation with a nonlawyer (NL):

NL: What kind of work do you do?

EL: I'm a lawyer.

NL: What kind of lawyer?

EL: I practice environmental law.

NL: That's great. That must be a very interesting and exciting field. There is so much being done now for protection of the environment.

This conversation is one aspect of environmental law that has not changed in twenty-five years.¹² Environmental lawyers have been widely and correctly perceived, both by nonlawyers and other lawyers, as doing extremely interesting and useful work.

What may be incorrect, however, is the accompanying and widely held assumption that every "environmental" lawyer is a lawyer for the environment.¹³ The source of this impression is probably the historical fact that the most visible lawyers at the genesis of this field were those working from a proenvironmental protection, proenvironmental plaintiff, proenforcement position. The popular image still is formed mostly by publicity surrounding lawsuits brought by public interest lawyers for environmental groups or by environmental prosecutors at the federal, state,

reader obviously is free to supply his or her own. Also, these 10 are not the only such paradoxes that could be identified. For example, a recent commentary on the prosecution of environmental crimes noted another: "Over the past 20 years environmental laws covering hazardous waste, toxic substances, and air and water pollution have become more complex and stringent. But paradoxically, the very laws and regulations designed to protect the environment may have contributed in several ways to increasing the incidence of environmental violations." THEODORE M. HAMMETT & JOEL EPSTEIN, U.S. DEP'T OF JUSTICE, PROSECUTING ENVIRONMENTAL CRIME: LOS ANGELES COUNTY 2 (1993); see also FREDERICK R. ANDERSON ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY 364 (2d ed. 1990) ("[O]ne effect of the Clean Air and Water Acts is to create pressures for land and subsurface disposal of wastes that were formerly spewed into the air or water media.").

12. There was a brief period in the early 1980s when this conversation was not encountered quite as often as at other times. Federal cutbacks in environmental regulation and enforcement efforts prompted questioning in some quarters about the viability of environmental law as a practice specialty. For example, law student enrollment in environmental courses in many schools temporarily experienced a considerable decline.

13. Nonlawyers who are more knowledgeable about environmental practice may insert into the typical conversation another question, such as "Which side do you work on?" or "Do you represent the good guys or the bad guys?"

and local levels of government.¹⁴ Lawyers in these two categories always have been, and still are, the easiest to perceive as lawyers for the environment, even though the label "environmental lawyer" generically applies to all lawyers who work on environmental matters.

These perceptions are paradoxical because while environmental lawyers are seen as lawyers for the environment, the vast majority of environmental lawyers are neither public interest lawyers nor prosecutors. Most environmental lawyers represent regulated interests, such as polluting industries, private companies engaged in land or natural resource development projects, or governmental or quasi-governmental agencies that are polluters or resource users themselves. The gap between the proenvironment connotation of "environmental lawyer" and the type of work most environmental lawyers perform reflects lingering confusion regarding the functions of the environmental bar. This confusion exists not just in public perceptions, but to some extent within the legal profession as well.

Perhaps the confusion is best exemplified by a governmental attorney, such as one in a state attorney general's office, who at times may represent environmental enforcement agencies and at other times may represent state facilities that are sources of pollution or other adverse environmental impacts. Can the lawyer fulfilling both of these roles meaningfully be seen—or see himself or herself—as a lawyer for the environment? Is this lawyer at times really working against the environment in the service of other economic or political objectives? In this and other contexts, should the term environmental lawyer be used more sparingly, perhaps only by the two categories of plaintiffs' lawyers mentioned above? Does environmental practice need more specific labelling of subspecialties on opposing sides, of the type commonly found in the labor law and torts fields? In addressing these questions, it is important to examine the functions of the majority of environmental lawyers, those who represent private industry or developers. Are they working for the environment? The underlying issues here are difficult ones with which

14. It also is often believed by nonlawyers that environmental lawyers predominantly work on natural preservation issues involving wildlife, forests, oceans, wilderness areas, et cetera. At least as much environmental law work, however, pertains to urban environmental conditions such as air pollution, industrial site contamination, and wastewater treatment. As discussed *infra* part VIII with reference to the "overprotection of the public" paradox, a new breed of "environmental poverty lawyers" also is now expanding the scope of environmental law to go beyond the traditional focus on humanity's relationship to earth. Instead, they are concentrating on the distribution of environmental risks and impacts as among different human communities. See generally Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 *ECOLOGY L.Q.* 619 (1992).

the environmental bar has not yet come to grips: What are the ultimate responsibilities of lawyers who work on environmental problems? Are there unifying principles or shared objectives that govern the work of environmental lawyers regardless of which side of the fence they are on at one time or another?

A phenomenon that highlights the underlying difficulty is the career transition of many prominent environmental lawyers who formerly performed highly visible and important work for national environmental organizations or for federal enforcement agencies, but who now are working in large, private law firms.¹⁵ Must this jumping across the proverbial fence only be understood as "selling out," or is there more consistency among the goals of environmental lawyers for environmental groups, government agencies, and private industry than traditionally is recognized?

I believe there is a great deal of such sharing of objectives, and that lawyers and law students need to pay closer attention to it. In doing so, they will develop a clearer understanding of their own roles and responsibilities in various contexts and in representing various types of clients. They will understand that the goals of all environmental lawyering are a blend of environmental protection goals, specific client objectives, and the pursuit of justice.¹⁶ Also, with such understanding, I believe there are good prospects for eventual resolution of the traditional conflict between the work of environmental lawyers and the public perception of what they do.

III. THE INDISPENSABLE LAWYER

Looking at the predominance of lawyers in the making and implementation of environmental policy, one could conclude that lawyers are indispensable in virtually every aspect of this work. Since the creation of the United States Environmental Protection Agency (EPA) in 1970, the Administrator has usually been a lawyer. At the state level, too, lawyers have held many key roles in environmental agencies. The same pattern can be found in large industrial enterprises, with lawyers filling important positions in environmental compliance and management. Most of

15. See, for example, *In the Hotseat at Justice*, 11 ENVTL. F., Jan.-Feb., 1994, at 40, describing an Environmental Law Institute seminar featuring five former Assistant Attorneys General for Environment and Natural Resources, at least one of whom earlier had practiced with a national environmental law organization. Four of the five are now associated with large, private law firms, and the fifth with a private environmental management corporation.

16. This formulation will be explored more fully in my forthcoming book, KENNETH A. MANASTER, ENVIRONMENTAL PROTECTION AND JUSTICE: READINGS ON THE RESPONSIBILITIES OF ENVIRONMENTAL LAWYERS (forthcoming 1995).

the national environmental organizations—even those that do not claim to be principally environmental law firms—frequently have lawyers in prominent leadership positions. Finally, and most obviously, regulated industry has consistently turned to the environmental bar for assistance since the advent of this realm of regulation.¹⁷

To lawyers, especially environmental lawyers, our omnipresence in environmental work seems natural. We readily believe that our skills in many areas—such as conflict management, policy analysis, statutory and regulatory drafting and interpretation, development of compliance strategies, and litigation methods—make us indispensable in all types of settings in which environmental standards, enforcement, or dispute resolution are at issue.

This belief is not quite correct. It has long been said that if environmental lawyers are to do their work well, they must be able to interact with technical experts such as engineers, chemists, biologists, geologists, hydrologists, toxicologists, and land use planners, as well as with agency inspectors and other enforcement officials. Lawyers habitually have accepted this wisdom, mainly construing it to mean that these other experts must be “used” for the achievement of client objectives under the lawyer’s direction.¹⁸ In other words, a litigation model, in which the lawyer brings in expert witnesses to help make the client’s case, has been the prevailing approach.¹⁹ Under that model the lawyer obviously is not the

17. John P. Dwyer, *Contentiousness and Cooperation in Environmental Regulation*, 35 AM. J. COMP. L. 809 (1987).

Environmental statutes enacted in the United States in the last two decades dramatically increased the policymaking authority of lawyers at the expense of the scientists and engineers. With the ascendancy of the lawyers came a sudden shift in the regulatory environment. There was a steady flow of new statutes, regulations, and lawsuits. The business community felt that regulatory policy was always in flux, that enforcement was unpredictable and arbitrary, and that the rules, when enforced, were inflexible and unreasonable in light of particular circumstances.

Id. at 814-15 (footnotes omitted).

18. Kenneth A. Manaster, *Early Thoughts on Prosecuting Polluters*, 2 ECOLOGY L.Q. 471 (1972).

Ideally [an environmental] prosecutor should have a background in engineering, particularly in those fields of engineering most often involved in pollution control questions, or in chemistry or biology. Since there are not many attorneys with this type of training, the attorney without a technical education must rely upon trained engineers, chemists, biologists, and other qualified persons who can make available to him the information and evaluations he will need in assessing pollution problems and solutions.

Id. at 482.

19. This model seems to apply even in the well-known national environmental law organizations, where the client usually is the organization itself and where scientists often are an integral part of the permanent staff.

only source of useful knowledge and opinion, but the lawyer is in the center and is indispensable.

There are many types of environmental work that lawyers traditionally have performed, but that now are being seen as more logically and efficiently the domain of other types of personnel. The presentation of a regulated company's views on proposed regulations, the completion of permit applications, the negotiation of permit terms with agency staff, the clarification of clean-up standards for a contaminated site—these and many other tasks have important legal implications, but increasingly the work is being done by experts other than lawyers.²⁰ The legal profession was among the first to grasp the broad importance of the environmental movement, as well as to realize how challenging and fascinating environmental issues can be, but that does not mean other disciplines do not have great contributions to make. Lawyers' interest and enthusiasm may have contributed to their omnipresence in the field, but omnipresence does not equal omniscience.

More than ever, other types of professionals are available and well-equipped to perform tasks that environmental lawyers have usually performed or directed. Each of the above-mentioned tasks, and many others as well, now are performed by environmental consultants from a variety of technical disciplines, by companies' and agencies' own internal specialists, and by broadly trained environmental managers. There are increasing opportunities for nonlawyers to enhance their capabilities to perform these functions through educational programs for degrees or certificates in environmental specialties or generally in environmental management. Furthermore, economic constraints have led many regulated businesses to seek out lower cost expertise for functions not unequivocally in the domain of law practice.

The point of these developments, in part, is that lawyers initially filled a need that now can be filled by others. Beyond this, however, a significant tension remains: Lawyers need not always be central and in-

20. Recent promotional literature for a two-day seminar offered by the Environmental Policy Group at the Massachusetts Institute of Technology reflects this trend. The seminar, on "Negotiating Environmental Agreements," is targeted at "senior private and public sector executives," including "engineers involved in writing and submitting permits for approval to federal, state and local regulatory bodies" and "private consultants who advise on reapplication strategy." The brochure tells them, "You ought to be able to work with regulators to negotiate the terms of permit applications, compliance reviews, and monitoring requirements, and settle enforcement actions in a way that won't compromise the regulators or undermine their ability to make independent judgments on the merits of your claims." Other than repeated references to the value of avoiding "expensive legal proceedings" and "unnecessary litigation," the premise appears to be that these tasks can and should be undertaken without lawyers (brochure on file with Author).

dispensable in environmental work, but sometimes they must be. If litigation is a possibility or an actuality, if significant regulations or statutory provisions are unclear, if potential permit conditions or environmental impact assessments could have an effect on the viability of continued economic activities or a proposed development project, if an environmental audit may reveal violations of the law—the list is unlimited—a lawyer is needed. This point might not be worth making at all but for two significant factors.

First, environmental regulation thus far has embodied a working presumption that environmental lawyers are virtually always needed. However, the marketplace for environmental expertise is changing in ways that drastically—and at times uncomfortably for lawyers—rebut or undermine that presumption. Second, it is not always easy for a client, or even for a lawyer, to know whether or when a lawyer's skills need to be brought to bear upon a particular environmental matter. At times lawyers must be part of the team addressing a client's environmental responsibilities and must be in the center of the decision-making process. At other times a lawyer's participation is important, but only in a more peripheral, advisory role. And sometimes the matter can be handled as well, or better, by the client's own nonlegal personnel, by outside nonlegal consultants, or by a combination of the two. Thus, lawyers and potential clients are challenged to recognize that environmental lawyers are sometimes indispensable and sometimes superfluous. The hard part is to determine which is true when.

IV. THE COMPLEX LEGAL ARSENAL

Environmental statutes, regulations, and related judicial doctrines are complex, as every environmental lawyer and student of the field knows. Over the past twenty-five years there has been an unending proliferation of regulatory provisions. Some of these enactments address important requirements in extremely vague and general language.²¹ Conversely, others are astonishing in the specificity with which the legislature or regulatory agency has spoken.²² Through all of these pronouncements, the body of environmental law has become bigger and

21. See, e.g., CAL. HEALTH & SAFETY CODE § 41700 (West 1986) (prohibiting discharge of "such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public").

22. See, e.g., 42 U.S.C. § 7473(b) (1988) (specifying, in micrograms per cubic meter, maximum allowable increases in concentrations of sulfur dioxide and particulate matter in significant deterioration areas under Clean Air Act).

more intricate. There is more of the field to learn, and the subtleties to be grasped seem more challenging than ever.

At the same time, however, the range of basic legal tools and regulatory methods is not really very broad and has not changed markedly since the earliest years of the field.²³ Most environmental lawyering has addressed the implementation of mandatory performance standards, and information reporting requirements, embodied in statutes, regulations, and permits.²⁴ Enforcement of these standards and requirements may be in administrative fora, or through civil or criminal court proceedings. Challenges to these standards and requirements at the outset, as well as to their embodiment in permits, open up the realm of judicial review of administrative agency action.²⁵

23. Cf. ENVIRONMENTAL LAW INST., ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY § 4.2, at 130 (Celia Campbell-Mohn et al. eds., 1993) ("There are ten types of legal tools that environmental statutes use to implement the objectives [of environmental law]. They are command-and-control standards, research and development, social funds, civil penalties, liability, planning, economic incentives, information dissemination, property rights, and contracts.").

24. "Command-and-control regulations are the nuts and bolts of environmental tools. Virtually every environmental statute relies partially on command-and-control regulation. Command-and-control regulation is as pervasive a tool as human health is an objective." *Id.* at 131.

Performance standards establish an acceptable level of protection or control without specifying the particular method to be used for complying with them. . . .

Performance standards are particularly important in pollution control. Effluent (water) and emission (air) standards specify a mean or maximum permissible discharge of a pollutant from a type of source, but air and water pollutants are not the only type of pollution regulated. . . .

. . . In general, performance standards are output-oriented. They are intended to force technological improvement and innovation: The critics of regulation prefer performance standards to design standards, because the former leave at least some choice about how they will be attained.

ANDERSON ET AL., *supra* note 11, at 67. "A common example [of a performance standard] is an emission limit, contained in a facility permit. The emission limit states the amount or concentration of pollutant which may be released to the environment from that facility." 1 ENVIRONMENTAL LAW INST., LAW OF ENVIRONMENTAL PROTECTION § 3.02[3], at 3-10 (Sheldon M. Novick et al. eds., 1987). This commentary also identifies "three common methods of setting performance standards," basing them "directly on environmental quality standards," "on a balance between the benefits of an activity and the environmental damage it may do," or "on some benchmark performance—of the best plant in an industry, for example." *Id.* at 3-10 to -11.

25. Some commentators have characterized environmental law as fundamentally a law of judicial review of agency action. ANDERSON ET AL., *supra* note 11, at xxiv; *see also* JOSEPH L. SAX, DEFENDING THE ENVIRONMENT: A STRATEGY FOR CITIZEN ACTION 239 (1971) ("[E]nvironmental questions are pre-eminently problems caused by powerful and well-organized minorities who have managed to manipulate governmental agencies to their own ends.").

Judicial review proceedings originally provided some of the most intellectually exciting doctrinal materials in the field. *See, e.g., Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir.), *cert. denied*, 426 U.S. 941 (1976); *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971). Proceedings of this type have continued to

Even economic tools for pollution control purposes are not something new. Since the 1960s there has been a stream of academic writings calling for the greater application of economic incentives in place of command and control regulatory methods.²⁶ Only now in the 1990s, does there appear to be substantial acceptance of the economists' invitation to try these alternative strategies.²⁷

In short, environmental lawyers have worked, and will continue to work, within a rather obvious paradox of this field. In its basic tools, and probably even its basic objectives, environmental law is not all that difficult to understand. The details of its explication, implementation, and enforcement, however, are rife with unending complexities.

V. PLAYING HARDBALL

In many ways the rhetoric of environmental lawyering is deceptive, as suggested above by the "lawyer for the environment" paradox. Another example of this is the disparity between the readiness of all sides in environmental disputes to declare their readiness to "play hardball" to achieve their objectives, and the evident necessity and value of cooperation and compromise in virtually all such conflicts.

Participants in environmental disputes usually talk very tough when asserting the importance of the values they have at stake and the necessity for taking firm stances to protect those values. The toughest talk probably comes from environmental enforcement agencies and public interest environmental attorneys. In large part their rhetoric is a function

provide appellate decisions that are traditional grist for the mill of law teaching. Such cases, however, are only one portion of the environmental law field, and on a day-to-day basis they are a small part of most practitioners' work.

A related misperception of the environmental law field also appears in much legal scholarship and most of the published teaching materials; it is the view that environmental law is mainly federal law. As Professor Selmi and I have stated elsewhere, "[T]he majority of lawyers working on environmental problems—either on a regular or an occasional basis—deal in most instances with state law and local regulations, rather than with federal law and agencies." DANIEL P. SELMI ET AL., *STATE ENVIRONMENTAL LAW* 1-1 (1989).

26. See, e.g., ALLEN V. KNEESE & CHARLES L. SCHULTZE, *POLLUTION, PRICES, AND PUBLIC POLICY* (1975); see also J.H. DALES, *POLLUTION, PROPERTY AND PRICES* (1968); THE ECONOMICS OF AIR POLLUTION (Harold Wolozin ed., 1966); Larry E. Ruff, *The Economic Common Sense of Pollution*, PUB. INTEREST, Spring 1970, at 69.

27. See 42 U.S.C. § 7651b (Supp. III 1991) (auction and trading system for allocated allowances of sulfur dioxide emissions under Clean Air Act acid deposition control provisions). In October 1993 the South Coast Air Quality Management District in the Los Angeles area adopted an ambitious emissions trading program, the Regional Clean Air Incentives Market (RECLAIM). Initially RECLAIM will address emissions of nitrogen oxides and sulfur oxides, and later it is to be expanded to cover organic compounds as well. See *RECLAIM Rules Adopted*, CAL. ENVTL. INSIDER, Oct. 15, 1993, at 1.

of the important public values they are seeking passionately to protect, usually with limited financial resources and personnel at hand. Their rhetoric also reflects the political context in which they operate and from which they derive needed support. Despite the adversarial rhetoric, a dominant theme in environmental practice is cooperative problem solving and compromise. There are many reasons for the prevalence of this orientation, beginning with the great complexity of environmental issues and ending with the tremendous cost in time and money of attempts to resolve environmental disputes through formal adversarial processes.²⁸ Given the apparent conflicts of values and the substantial economic concerns usually present in environmental disputes, posturing and adversarial speechmaking by contending parties are not surprising. Paradoxically, however, compromise usually provides the road to conflict resolution for precisely the same reason—because the stakes are so high for all participants.

These observations about environmental law are probably also valid with regard to other fields of law. Litigation and other types of legal proceedings commonly commence with tough talk and firm positions, only to evolve to negotiation and settlements. In environmental law, however, contending parties often have unusually strong inclinations to begin with a claim to the moral high ground and a corresponding commitment to fight to the finish.²⁹ Similarly, the distinctive complexities and uncertainties of technical evidence in environmental law lead to unusually strong pressures for compromise and negotiated resolutions. The “playing hardball” paradox, in other words, is common in many fields of law, but is an especially vivid feature of environmental law.

At times, of course, cooperative approaches are not realistic or feasible, particularly when the conduct of an unusually irresponsible or recal-

28. Professor Selmi and I have commented elsewhere on this theme as follows:

As a matter of practical and economic efficiency, it is almost always in the best interests of a private client for its attorney to work toward cooperative compliance with regulatory requirements whenever possible. It is also in the interest of the regulators themselves to pursue cooperative solutions to regulatory problems, both to further their statutory objectives most expeditiously and to conserve budgetary resources.

SELMI ET AL., *supra* note 25, at 7-3.

Another factor contributing to negotiated outcomes is the familiarity and working relationships—even friendships—that develop among environmental lawyers across the usual battle lines. Because so many environmental lawyers find their work satisfying, they tend to stay in the field, often in the same jobs. Thus, lawyers for environmental groups, regulated businesses, and enforcement agencies frequently get to know one another quite well over time and develop informal lines of communication and patterns of mutual trust.

29. See discussion *infra* parts VI (“good guys-bad guys” paradox), VII (“monopoly on the public interest” paradox).

citrant polluter is at issue.³⁰ But most of the time—when environmental disputes are headed for either legislative, executive, or judicial fora—negotiation and compromise are pursued, even if the participants' initial rhetoric was harsh.³¹

What remains odd about this aspect of environmental law is that, despite the prevalence of negotiation and compromise, they still usually seem to be embraced begrudgingly. It is as though each party only reluctantly acknowledges that all-out victory—consistent with each one's initial projection that its righteous cause would prevail without qualification or dilution—is quite unlikely to be attained, at least not without a prolonged and costly battle.

Perhaps this reluctance suggests that environmental lawyers and their clients are captives of the adversarial rhetoric that inaugurated environmental law and regulation. If we would move beyond this rhetoric, to explicit recognition that cooperation and compromise usually are the only sensible courses, we might enter environmental disputes quite differently. Indeed, it might become the rule, rather than the exception it has been, to choose to resort to carefully planned and timely alternative dispute resolution methods, such as mediation, arbitration, and negotiated rule making. Until then, still confined within this paradox—claiming we must play hardball but then negotiating to common ground—we inefficiently grope our way through more haphazard negotiations until we finally reach agreement somehow.

30. SELMI ET AL., *supra* note 25.

Obviously some disputes cannot be resolved cooperatively. These inevitably will reach contested stages through the formal administrative process and on into enforcement litigation or judicial review of agency action. This frequently occurs in the environmental area, for example, when industrial organizations or environmental groups challenge new regulations on grounds of excessive stringency or leniency, respectively. Enforcement proceedings when a particularly novel or extreme regulatory standard or practice is at issue, or when an unusually recalcitrant polluter is targeted, also are less likely to be susceptible to amicable resolution.

Id. at 7-4.

31. A somewhat different emphasis is presented in Dwyer, *supra* note 17. Professor Dwyer acknowledges that "a substantial amount of negotiation and accommodation . . . regularly occurs in environmental regulation," *id.* at 817, and that "[i]nformal cooperation between government and business . . . occurs, quite legitimately, every day," *id.* at 824.

Nonetheless, he views "contentiousness as an important aspect of the American style of regulation," especially as evidenced by environmental and business groups' readiness to challenge new regulations. *Id.* at 817. He notes "[t]he confrontational politics characteristic of American environmental regulation" and observes that "the posturing that accompanies adversary proceedings polarizes the debate, making accommodation less likely." *Id.* at 820. "Parties may take extreme positions to satisfy constituencies or ideological commitments. As substantive positions harden, parties may find it more difficult to make tradeoffs. The inevitable result is more litigation and delayed policymaking." *Id.*

VI. GOOD GUYS AND BAD GUYS

Closely linked to the “playing hardball” paradox, and contributing to its persistence, is the tradition we have developed of labelling different categories of participants in environmental issues as good guys or bad guys—the cowboy-hero environmental protection types wearing the white hats versus the sinister despoilers of nature and public health wearing the black hats. The starting point for this tradition twenty-five or more years ago is obvious: Environmental activists and prosecutors principally work for environmental protection, and they generally do not undertake pollution-causing or resource development projects. Consequently, they readily look like environmental good guys. In contrast, businesses principally work for the production of goods and services at a profit, and they do generally cause pollution and the depletion of natural resources: The bad guys label seems to fit just fine. Indeed, the recent upsurge of interest in the application of criminal penalties, including incarceration, to environmental violators tends to reflect and strengthen a general perception of industry as the evil enemy of the environment.

Despite the temptation to view the major players in environmental disputes in this way, we simultaneously have recognized that the good guys-bad guys dichotomy is an oversimplification or distortion of social reality. In the early days of the environmental movement, the cartoon character Pogo expressed a more sophisticated outlook on the causes of environmental degradation when he said, “We have met the enemy and he is us.”³²

Not only a cartoon character but also environmental experts have pointed out that environmental threats are a function of irresponsible patterns of resource use, consumption, and waste in which virtually all Americans have some complicity.³³ The challenge posed then, and still

32. WALT KELLY, *THE BEST OF POGO* 163 (Mrs. Walt Kelly & Bill Crouch, Jr. eds., 1982) (cartoon strip satirizing Earth Day 1971), cited in *RESPECTFULLY QUOTED* 102 (Suzy Platt ed., 1989); see BARRY COMMONER, *THE CLOSING CIRCLE* 10 (1971) (quoting Pogo as “keen observer [who] blamed everyone”).

This succinct expression was derived from a sentence in the Foreword of an earlier publication, *The Pogo Papers* (1953): “Resolve then, that on this very ground, with small flags waving and tinny blasts on tiny trumpets, we shall meet the enemy, and not only may he be ours, he may be us.”

RESPECTFULLY QUOTED 102 (Suzy Platt ed., 1989).

33. One commentator noted that “[t]he fault lies with human society—with the ways in which society has elected to win, distribute, and use the wealth that has been extracted by human labor from the planet’s resources.” COMMONER, *supra* note 32, at 178. Another commentator made a similar observation:

Underlying energy choices are real but tacit choices of personal values Those that make a high energy society work are all too apparent. . . . Indeed, we are learning that many of the things we had taken to be the benefits of affluence are really

posed now, is whether this country, and others as well, can fundamentally alter humanity's relationship to the resources of nature. New programs for waste minimization, pollution prevention, and environmental marketing, and efforts to create sustainable development strategies are responses to this challenge. To the extent that industry embraces or enhances any of these types of efforts, the bad guys label would seem to be less and less apt.

Recent public opinion polls have shown widespread support for strong environmental protection programs.³⁴ Increasingly, we also find that the level of environmental sensitivity within the business community

remedial costs, incurred in the pursuit of benefits that might be obtainable in other ways without those costs.

AMORY B. LOVINS, *SOFT ENERGY PATHS: TOWARD A DURABLE PEACE* 57 (Harper Colophon 1979) (1977).

[T]he past three centuries have been an era of abnormal abundance, which has shaped all our attitudes and institutions.

. . . [V]irtually all the philosophies, values, and institutions typical of modern society are the luxuriant fruit of an era of apparently endless abundance. The return of scarcity in any guise therefore represents a serious challenge to the modern way of life.

WILLIAM OPHULS, *ECOLOGY AND THE POLITICS OF SCARCITY* 8-9 (1977).

Every consumer decision you make has an environmental impact. This is an ecological fact of life. Every time you visit the supermarket, buy a ticket to travel, choose a place to live, your choices have an effect, for better or worse, on the quality of the air you breathe and the water you drink—on the world you experience with your eyes and ears and nose.

PAUL SWATEK, *THE USER'S GUIDE TO THE PROTECTION OF THE ENVIRONMENT* 3 (1970).

Lawyers defending air polluters in some early enforcement cases rather clumsily tried to make this point, so as to remove some of the taint attaching to their clients as polluters, by cross-examining citizen witnesses on whether they drove automobiles to the trial or to the pollution source in the course of investigation. Such questioning implied that the witnesses not only caused air pollution themselves, but that their heartfelt concern about environmental quality was not matched by responsible action. In an extraordinarily attenuated way, the point had some validity, but its relevance to the particular proceeding was invariably so weak as to make the tactic an embarrassment for defense counsel. *See* Hearing Record at 518-22, *Moody v. Flintkote Co.*, Nos. 70-36, 71-67 (Ill. Pollution Control Bd. hearing on Apr. 26, 1971).

34. CONSERVATION FOUND., *supra* note 2.

In most countries, the viability of government programs to conserve and protect the environment depends on strong public support. The durability of this public support is one of the remarkable characteristics of environmental programs in the United States. Since Earth Day in 1970, many observers and politicians have predicted that public attention would quickly fade as some new fad caught the public's fancy. Much to the surprise of many, . . . the public's support for environmental programs appears to be "stronger than ever."

Id. at 20; *see also* Roger D. Wynne, *Defining "Green": Toward Regulation of Environmental Marketing Claims*, 24 U. MICH. J.L. REFORM 785, 785 (1991) ("A 1988 survey found that more Americans described themselves as environmentalists than as either Republicans or Democrats. A year later, a Gallup Poll reported that an overwhelming 76% of Americans consider themselves environmentalists." (footnote omitted)); Rose Gutfeld, *Eight of 10 Americans Are Environmentalists, at Least So They Say*, WALL ST. J., Aug. 2, 1991, at 1, 1 ("[V]oters don't expect technology to bail the nation out of its problems. By 53% to 34%, they say it will

mirrors the rising level of public concern for environmental quality. Indeed, we can assume that at least some of the people who express support for environmental protection in opinion surveys are the same people charged with environmental protection duties in industry.

As fashionable as it has been to identify industry as the principal, unequivocal environmental culprit, for various reasons it is becoming more difficult to continue that mode of speech and thought. Of course, if one holds the view that private industry and mass advertising wholly shape public attitudes toward material needs, then it is appropriate to blame the industrial sector for the continuing environmental folly of many of our resource-use patterns.³⁵ I believe, however, that the contributing factors are considerably more complicated.

Certainly industry is in a position to influence public attitudes toward either greater or lesser environmental responsibility. Environmental law and regulation can exert considerable pressure on productive enterprises to exercise this leadership role with more concern for environmental quality than in the past. Conversely, the fundamental structure of our economic apparatus and public demands for the swift and convenient provision of goods and services place pressures upon industry that invite inattention and shortcuts regarding environmental responsibilities. In the early years of environmental regulation, there was considerable interest in literature suggesting that nations with different economic or religious value systems than ours might do much better in protecting nature than our Western capitalist society. Adverse environmental conditions around the world now suggest that accurate explanations for these ills are much more complex.

To summarize, we identify good guys and bad guys, yet we know that we distort the truth in doing so. An early, rather foolhardy public nuisance suit illustrates the paradox. The suit was brought in state court in Los Angeles seeking, among other things, an injunction against virtually all major stationary sources of air pollution in the Los Angeles area, and against the sale and registration of new motor vehicles in Los Angeles County.³⁶ Apart from the obvious difficulty a court would face in issuing a single injunctive order to address what is ultimately a mul-

take fundamental changes in life style, rather than scientific advances, to bring about dramatic changes in the environment.”).

35. Early in the environmental movement, John Kenneth Galbraith was quoted as questioning “the dollar vote assumption which, he pointed out, presumes consumer sovereignty.” SWATEK, *supra* note 33, at 20. Instead, “producer sovereignty” was targeted as a determinant of consumption patterns. “Producer sovereignty is achieved in at least two ways, by advertising and by lobbying. Both are used extensively by the giant corporations . . .” *Id.*

36. *Diamond v. General Motors Corp.*, 20 Cal. App. 3d 374, 97 Cal. Rptr. 639 (1971).

tifaceted, long-term, regulatory problem,³⁷ another difficulty was evident: The suit was filed on behalf of a class of over seven million plaintiffs—all those adversely affected by air pollution—against a class of 293 industrial and municipal defendants—all major contributors to air pollution. Among the grounds for dismissal of the action was the great overlap in membership and interests among the good guy class and the bad guy class: “We do not deal with a simple dispute between those who breathe the air and those who contaminate it.”³⁸ Pogo’s insight prevailed, and the popular dichotomy again was shown to be illusory.

VII. MONOPOLY ON THE PUBLIC INTEREST

As environmental policy is developed, and as disputes arise, it is common for each category of participants to assert that its perspective represents and protects the most important public values. Such claims contribute to the “playing hardball” and “good guys-bad guys” paradoxes discussed above. An additional contradiction is linked to this attitude as well.

Twenty-five years of environmental law and regulation have demonstrated that each major player in environmental policy does indeed have important and valid public interests on its agenda. At the same time we have learned that each interest group is also entirely capable of clouding those laudable concerns with short-sighted, self-serving, even petty objectives and strategies. Neither environmental groups, government agencies, nor business interests have a monopoly on the public interest, or a monopoly on virtue in the methods of accomplishing their goals. This paradox is probably the most self-evident of all. It simply reflects the reality that people act on a variety of shifting motives, often in ways that obscure or defeat their nobler goals. Nonetheless, some reminders of how this reality figures in environmental work may be worthwhile.

Businesses and labor unions obviously seek to speak and act consistently for the promotion of a strong economy and full employment. At the same time short-term revenue concerns of industry and short-term

37. *Id.* at 382-83, 97 Cal. Rptr. at 645-46.

Plaintiff is simply asking the court to do what the elected representatives of the people have not done: adopt stricter standards over the discharge of air contaminants in this county, and enforce them with the contempt power of the court. . . .

. . . The objective, which plaintiff envisions to justify his class action, is judicial regulation of the processes, products and volume of business of the major industries of the county.

Id.

38. *Id.* at 382, 97 Cal. Rptr. at 645. “The immediate effect of such an injunction would be to halt the supply of goods and services essential to the life and comfort of the persons whom plaintiff seeks to represent.” *Id.* at 381, 97 Cal. Rptr. at 644.

contract objectives of unions can mar these interests' approach to environmental compliance. Governmental programs for environmental protection clearly are aimed at important public needs, and the vast majority of government personnel at all levels working on environmental matters are talented and well-intentioned. Nonetheless, all of the classic failings of government bureaucracy at its worst—illogical priorities, inexplicable delays, ambiguous directives, inefficient paperwork, consistency for its own sake, turf wars, and so on—can be found from time to time in environmental regulatory processes.³⁹

Finally, large and small environmental organizations come closest to purity of motive and method in most of the work they do. Nonetheless, even they sometimes are swept up in political alliances and in the pursuit of funding sources—as by the occasional threatening or filing of citizen suits with seemingly dominant interest in the recovery of attorneys fees—in ways that are unworthy of their avowed goals.

Each group tends to believe it has the truest and most complete vision of how environmental policy should be made and implemented, but none does. Each tends to believe that its methods are consistently noble, yet at times each strays from the path set by its ultimate goals.

VIII. OVERPROTECTION OF THE PUBLIC

Environmental policies, as embodied principally in statutes at the federal and state levels, often are precautionary in nature. Many of their regulatory commands aim at the protection of the public and the environment from threats of harm prior to its actual infliction. Federal envi-

39. Recently a federal appellate court severely chastised the EPA for what the court saw as deplorable conduct. The court rejected the agency's attempt under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (1988 & Supp. III 1991), to recover from certain companies the costs of providing an alternate water supply (AWS) to an area in which the groundwater was contaminated by chromium discharges. The court said,

Without knowing, or even attempting to learn, whether the AWS would serve to protect the safety and health of anyone, the EPA officiously ignored the comments of [two of the companies], and the results of its own remedial investigation, and stubbornly proceeded to spend over \$300,000 to furnish a water supply system that was not needed, was not allowed to be used by the commercial establishments whose wells . . . were the only ones with chromium contamination in excess of the [Safe Drinking Water Act] standards, and did very little—indeed, if anything—to reduce any perceived public health threat posed by the chromium-contaminated groundwater. We can only assume that the EPA was not concerned about the cost of the AWS, because it believed that it could recover whatever was spent from [a company]. Although the EPA's powers under CERCLA are indeed broad, Congress has not provided that private parties must pay for the consequences of arbitrary and capricious agency action.

EPA v. Sequa Corp. (*In re* Bell Petroleum Servs., Inc.), 3 F.3d 889, 908 (5th Cir. 1993).

ronmental statutes, for example, frequently rely upon an endangerment criterion as the threshold for regulatory or enforcement action.⁴⁰

Some of these statutes also call for pollution standards to be set conservatively, at a more stringent level than may be necessary, in order to provide "an adequate margin of safety."⁴¹ The objective of these types of provisions, of course, is overprotection of the public, recognizing that the inadequacy of available data regarding environmental harms argues for an excess of caution. Thus we regulate preventively, in advance of actual harms, and we regulate conservatively, more stringently than may be necessary.

In recent years a serious new paradox of environmental law and regulation has come to light. At the same time that we seek to overprotect the public generally, we underprotect some of the most vulnerable segments of the population. In particular, attention is now focusing on the extent to which low-income and racial minority communities are exposed to substantially greater environmental hazards than other communities.⁴² Two principal types of allegations along these lines have been made.

First, it is charged that environmental enforcement efforts, including clean-up actions directed at hazardous waste sites, have favored wealthier, majority areas, while poorer, minority communities have received less attention and less aggressive exercise of governmental powers.⁴³ Second, an extensive body of research has confirmed that solid and hazardous waste disposal facilities are located in racial minority neighborhoods

40. *E.g.*, 33 U.S.C.A. § 1321(c)(2)(A) (West Supp. 1993); 42 U.S.C. § 6973(a) (1988); *id.* §§ 7408(a)(1)(A), 7411(b)(1)(A) (1988); 42 U.S.C. 7545(c)(1) (Supp. III 1991); 42 U.S.C. § 9604(a) (1988).

41. 42 U.S.C. § 7409(b)(1) (1988) (outlining primary national ambient air quality standards); *see also* 42 U.S.C. § 7412(d)(4) (Supp. III 1991) ("With respect to [hazardous air] pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards.").

42. *See generally* U.S. ENVTL. PROTECTION AGENCY, ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES (1992); Richard J. Lazarus, *Pursuing 'Environmental Justice': The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1993).

43. Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law*, NAT'L L.J., Sept. 21, 1992, at S2.

[P]enalties against pollution law violators in minority areas are lower than those imposed for violations in largely white areas. In an analysis of every residential toxic waste site in the 12-year-old Superfund program, the [*National Law Journal*] also discovered the government takes longer to address hazards in minority communities, and it accepts solutions less stringent than those recommended by the scientific community.

Id.

with greatly disproportionate frequency.⁴⁴ On the basis of this literature, poverty lawyers have become more active in environmental litigation under the banner of “environmental racism” or “environmental justice.” This litigation mainly challenges the proposed siting of such risk-creating facilities in disadvantaged neighborhoods.

It is too soon to tell what will be the outcome of this new focus on environmental conditions in poorer areas. Certainly grave doubts should arise about the validity and scope of the supposedly overprotective approach of environmental law. The contradiction is brought into even more vivid focus when it is recognized that environmental programs, especially those related to air pollution and toxic substances releases, claim to give special attention to vulnerable subpopulations such as children, the elderly, and pregnant women. To the extent that the health of these groups is already more impaired and imperiled in poorer communities for other reasons—such as inadequate nutrition or insufficient health care—disproportionate environmental risks in those communities are even more paradoxical and condemnable. Clearly the investigation and elimination of this paradox of environmental law warrant the highest priority.

IX. ECONOMIC COMPATIBILITY

One of the most difficult environmental policy questions is whether environmental protection and economic vitality are compatible. Politicians usually claim they are, and most people would like to believe we can have the best of both worlds.⁴⁵ The tension that arises is that our political rhetoric asserts that such harmony exists, but in fact there is limited proof of this and considerable evidence to the contrary.

Early in my career I represented Illinois enforcement officials seeking to control a company’s water pollution discharges into a river. Our efforts seemed to be having some constructive impact on the defendant, when suddenly we learned that the company had moved, taking both its pollution and its jobs, to a neighboring state with less stringent discharge requirements. To our added dismay, the company had relocated upstream on the same river! Clearly our environmental protection efforts

44. See, e.g., ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY* (1990); Robert D. Bullard, *The Threat of Environmental Racism*, NAT. RESOURCES & ENV’T, Winter 1993, at 23.

45. See, e.g., GORE, *supra* note 3, at xi (“[F]uture economic progress is inexorably linked to sound policies promoting protection of the environment and wise stewardship of our natural resources. . . . [T]he entire U.S. government ought to understand the economic significance of a healthy environment as a kind of infrastructure supporting future productivity.”).

had an adverse impact on the local economy in Illinois. In 1993 the debate over the possible environmental consequences of the North American Free Trade Agreement also vividly highlighted the widespread absence of public confidence that economic development and environmental control are compatible.

At various times during these twenty-five years of environmental regulation, it has been urged that economic strategies can be devised, both for the industrialized and the developing nations, that will provide both strong environmental quality and strong economic progress. Creative methods to harmonize both of these objectives have been implemented in some discrete contexts, as exemplified by the internal and external emissions offsets strategies allowed under the Clean Air Act.⁴⁶

More generally, from the "limits to growth" debate in the 1970s to more recent attention to sustainable development strategies, attempts to develop new approaches have been made by experts of many types. Hopefully these attempts, coupled with the necessary political commitment, ultimately will chart a course that will demonstrate the truth of the compatibility claim. Up to now that claim seems to be believed very little and acted upon only sporadically.

X. INTERCONNECTIONS OF NATURE

In a 1990 report the EPA's Science Advisory Board stated that "[t]he environment is an interrelated whole . . ."⁴⁷ This statement acknowledges a widely accepted, underlying principle of the environmental protection movement over the past twenty-five years—the interconnectedness and interdependence of all aspects of nature, including humanity. Virtually everyone who works in the environmental protection field would acknowledge this general, ecological truth.

Despite this awareness, the regulatory systems and legal tools we have developed largely ignore the interconnections of nature.⁴⁸ Environmental lawyers' and regulators' work tends to focus on a specific environmental problem in a specific environmental medium, usually ignoring collateral implications that the problem and its solution may have for other environmental concerns.

46. 42 U.S.C. § 7503(c) (Supp. III 1991).

47. SCIENCE ADVISORY BD., U.S. ENVTL. PROTECTION AGENCY, REDUCING RISK: SETTING PRIORITIES AND STRATEGIES FOR ENVIRONMENTAL PROTECTION I (1990).

48. See, e.g., BARRY G. RABE, FRAGMENTATION AND INTEGRATION IN STATE ENVIRONMENTAL MANAGEMENT at vii (1986) ("Although the overlap between [environmental] media and the transfer of pollutants across them may be common, we tend not to think much about it.").

At one time I believed the fragmentation of environmental protection efforts was largely a function of the ecological myopia of the legal profession.⁴⁹ That probably still is one part of the explanation for this persistent contradiction between our awareness of the natural environment's interconnectedness and our disjointed efforts toward environmental protection. Additionally, there are even more fundamental reasons for this enduring paradox.

Some efforts have been made to address environmental concerns in a more coordinated, holistic manner. Environmental impact statements, under the National Environmental Policy Act of 1969⁵⁰ and analogous state statutes, aim at more comprehensive examination of the effects of human activities on the environment. Other, more recent strategies have concentrated on cross-media environmental regulation, "integrated environmental management," and the use of risk analysis techniques to identify relative environmental risks and to set regulatory priorities.⁵¹

49. Kenneth A. Manaster, *Law and the Dignity of Nature: Foundations of Environmental Law*, 26 DEPAUL L. REV. 743 (1977).

While the public is increasingly aware of the unity of nature, lawyers and legal institutions have not come to that realization. This may be the result of legal training which is geared toward analyzing separate parts of a problem, rather than the whole. Lawyers think in terms of individual conflicts, cases and statutes, rather than the overall setting in which these matters arise. This kind of narrow focus is even found in some of the recent attempts to reform legal procedures for coping with environmental problems. Rather than establish a coordinated system, we create separate agencies to deal with air pollution, water quality, and solid waste management. Decision makers sometimes realize that the solutions to problems in one area may create new problems in the others, but seldom require that the interconnections be coordinated.

Id. at 746-47.

50. 42 U.S.C.A. §§ 4321-4370d (West 1985 & Supp. 1993).

51. See RABE, *supra* note 48; CONSERVATION FOUND., *NEW PERSPECTIVES ON POLLUTION CONTROL: CROSS-MEDIA PROBLEMS* (1985); *cf. First-Ever Multimedia Rules Proposed by EPA to Control Emissions from Pulp, Paper Mills*, 24 Env't Rep. (BNA) 1227 (Nov. 5, 1993) ("Air and water emissions from some 350 pulp and paper companies would be regulated by the first-ever multimedia rules proposed by the Environmental Protection Agency."). See *generally* SCIENCE ADVISORY BD., *supra* note 47, at 2 ("The concept of environmental risk . . . helps people discuss disparate environmental problems with a common language. It allows many environmental problems to be measured and compared in common terms, and it allows different risk reduction options to be evaluated from a common basis."); Daniel A. Mazmanian & David L. Morell, *EPA: Coping with the New Political Economic Order*, 21 ENVTL. LAW 1477, 1481 (1991) ("EPA must break out of its monomedia myopia, adopting instead a true cross-media focus."). See also U.S. ENVTL. PROTECTION AGENCY, *SANTA CLARA VALLEY INTEGRATED ENVIRONMENTAL MANAGEMENT PROJECT: STAGE TWO REPORT* at i (1987), where the concept of integrated environmental management is explained as follows:

Traditionally, [the] EPA has developed regulations aimed at controlling the health and environmental effects of a single industry or a single pollutant in air or in water. In contrast, the integrated environmental management approach compares a wide range of pollution problems in air, surface water and groundwater, and places those that appear to pose the greatest health risk at the top of the environmental

Thus far, however, these tools and strategies collectively appear to have produced little discernible change in conventional approaches to environmental regulation. Environmental law remains heavily Balkanized, as further evidenced by the increasing division of environmental law practice into subspecialties for air pollution lawyers, water lawyers, forestry lawyers, land use lawyers, et cetera.

Looking at the obstacles confronting these new efforts to bring environmental law into greater harmony with ecological insight, I am struck once again by the extraordinary complexity of the environmental challenges we face. There is just so astonishingly much that we do not yet know about the environment and about the environmental effects of human activities. Perhaps environmental lawyers could be better educated to see the broader context of their work and its implications. Perhaps regulatory bureaucracies could be shaken up and reorganized toward the greater implementation of integrated environmental management strategies. Perhaps increased use of risk assessment techniques would allow us to make rough rankings of ecological and health risks. Nonetheless, we still would face the grave limits of our knowledge—and that ignorance seriously impairs our ability to manage and protect the environment in ways that accurately mirror both its complexity and its fundamental unity.⁵²

The Science Advisory Board statement quoted above reads in full as follows: “The environment is an interrelated whole, and society’s environmental protection efforts should be integrated as well.”⁵³ It is easy to agree with this broad assertion of what “should be.” It is more difficult to see that integration and coordination in environmental law can be achieved in the foreseeable future. Even as we strive to make our legal and regulatory methods more sophisticated, accurate, and comprehensive, we continually will be reminded that the resolution of this paradox is exceedingly difficult, and perhaps ultimately beyond human grasp.

agenda. The integrated approach is founded on the concepts of risk assessment and risk management in which estimates of risk provide a common measure for comparing and then setting priorities among pollution problems.

Id.

52. LOVINS, *supra* note 33.

[W]e know next to nothing about the carefully designed natural systems and cycles on which we depend; we must therefore take care to preserve resilience and flexibility, and to design for large safety margins (whose importance we do not yet understand), recognizing the existence of human fallibility, malice, and irrationality (including our own) and of present trends that erode the earth’s carrying capacity.

Id. at 12.

53. SCIENCE ADVISORY BD., *supra* note 47, at 1.

XI. CONCLUSION: REASON FOR HOPE

The ten paradoxes discussed here exemplify some of the challenges facing environmental lawyers. The lawyer who understands these challenges, and how intractable most of them still are, may find it hard to be optimistic about the satisfactions to be gained, and the progress to be achieved, through environmental work. As noted in the Introduction,⁵⁴ pessimism may seem justified.

Fortunately, I believe another paradox is at work, essentially hidden within the "things change" phenomenon: The more things change, the more they remain the same—and the more reason there is for hope. The longer environmental law veterans toil in this field, the more they learn about the nature of environmental problems and about which strategies and solutions succeed and which do not. The personal concerns and commitments that have brought so many lawyers into this field over these twenty-five years have not changed, but instead appear to be reinforced as the staggering complexity and importance of the work have been more and more fully revealed.

At the same time the more attention the legal profession, regulatory agencies, the political system, and the public in general have given to environmental successes and failures, the greater the stimulus is for new generations of environmental lawyers to apply fresh energy and commitment to the work at hand.⁵⁵ Thus, despite the paradoxes in which we labor, environmental law continues to build upon itself—reeducating and reinvigorating those who were there at the beginning, challenging and stimulating those who have entered the field in the ensuing years, and welcoming those who see the importance of starting in this work now.

54. *See supra* part I.

55. "[C]oncern about the earth's future is continuing to rise throughout the world, giving us hope that the degradation will one day be reversed." *WORLDWATCH* 1993, *supra* note 4, at xvii.

